



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/612,906

07/07/2003

Masanori Araki

4320

24956

7590

06/29/2006

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.  
1800 DIAGONAL ROAD  
SUITE 370  
ALEXANDRIA, VA 22314

EXAMINER

KIM, HAROLD J

ART UNIT

PAPER NUMBER

2181

DATE MAILED: 06/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/612,906

Applicant(s)

ARAKI ET AL.

Examiner

Harold Kim

Art Unit

2181

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 25-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 09/458,705.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 20060517.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

*Fritz Fleming*  
FRITZ FLEMING  
Supervisory PRIMARY EXAMINER 6/26/2006  
GROUP 2100  
462181

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under Ex Parte Quayle, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 5/17/2006 has been entered.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 25-37 are rejected under 35 U.S.C. 102(e) as being anticipated by Newell et al., US Patent no. 5,918,248.**

4. In re claim 25, Newell et al. shows a system [fig 1] comprising:

a plurality of storage devices [one or more memory modules, col 4, lines 14-16];

and

control unit [col 2, lines 14-16] for controlling read/write of data requested by a plurality of host processors [col 2, line 11] into the plurality of storage devices, using a plurality of logical storage areas [feature of redundant hardware, col 4, line 18; col 4, lines 37-39] constituted by storage areas of the plurality of storage devices,

wherein, when the control unit receives multiple requests from different host

processors for the same logical storage area, the multiple requests are handled in parallel [proceed in parallel, col 14, lines 42-44].

5. In re claim 26, Newell et al. shows the control unit includes a plurality of host adaptors which control data transfer between the control unit and the plurality of storage devices [18, 20, fig 1; col 4, lines 14-16].

6. In re claims 27 and 28, Newell et al. shows a plurality of disk adaptors which control the read/write plurality of logical storage areas [feature of redundant hardware, col 4, lines 18-19].

7. In re claim 29, Newell et al. shows cache memories which enable the transfer of data between the host adaptors and the disk adaptors [col 4, line 21].

8. In re claim 30, Newell et al. shows a control memory [TST memory 28, fig 2] which stores control information into a plurality of tables [col 10, lines 51; fig 5].

9. In re claim 31, Newell et al. shows the control unit permits the multiple requests to be handled in parallel if the data ranges of the multiple requests do not overlap in the same logical storage area [feature of col 14, lines 42-44 as processing in parallel if accessing different location of memory].

10. In re claim 32, Newell et al. shows a system [fig 1] comprising:

a plurality of storage devices [one or more memory modules, col 4, lines 14-16];  
and

control unit [col 2, lines 14-16] for controlling read/write of data requested by a plurality of host processors [col 2, line 11] into the plurality of storage devices, using a

Art Unit: 2181

plurality of logical storage areas [feature of redundant hardware, col 4, line 18; col 4, lines 37-39] constituted by storage areas of the plurality of storage devices,

wherein, when the control unit receives multiple requests from different host processors for the same logical storage area and determines that the data ranges of the multiple requests overlap, the multiple requests are not handled in parallel [col 13, line 63 to col 14, line 3; col 14, lines 49-53].

11. In re claim 33, Newell et al. shows the control unit includes a plurality of host adaptors which control data transfer between the control unit and the plurality of storage devices [18, 20, fig 1; col 4, lines 14-16].

12. In re claims 34 and 35, Newell et al. shows a plurality of disk adaptors which control the read/write of data from/to the plurality of logical storage areas [feature of redundant hardware, col 4, lines 18-19].

13. In re claim 36, Newell et al. shows cache memories which enable the transfer of data between the host adaptors and the disk adaptors [col 4, line 21].

14. In re claim 37, Newell et al. shows a control memory [TST memory 28, fig 2] which stores control information into a plurality of tables [col 10, lines 51; fig 5].

### ***Conclusion***

Any response to this action should be mailed to:

Mail Stop \_\_\_\_\_  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

The centralized fax number is 571-273-8300.

The centralized hand carry paper drop off location is:

U.S. Patent and Trademark Office  
Customer Service Window, Mail Stop \_\_\_\_\_  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Any inquiry of a general nature or relating to the status of this application should be directed to the central telephone number (571) 272-2100.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harold Kim whose telephone number is 571-272-4148. The examiner can normally be reached on Monday-Friday 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fritz Fleming can be reached on 571-272-4145. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/612,906

Page 6

Art Unit: 2181

*HK*

Harold J. Kim

Patent Examiner

June 25, 2006/HK

*Fritz M. Fleming*  
FRITZ FLEMING  
*Supervisory* PRIMARY EXAMINER 6/26/2006  
GROUP 2100  
A42181